

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=7; day=21; hr=13; min=54; sec=56; ms=694;]

=====

Application No: 10573478 Version No: 3.0

Input Set:

Output Set:

Started: 2008-06-24 14:32:31.560
Finished: 2008-06-24 14:32:32.099
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 539 ms
Total Warnings: 6
Total Errors: 0
No. of SeqIDs Defined: 22
Actual SeqID Count: 22

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)

SEQUENCE LISTING

<110> KISELEV, VSEVOLOD I
 PETR, SVESHNIKOV G

<120> METHODS, KITS, AND COMPOSITIONS FOR THE DEVELOPMENT AND
 USE OF MONOCLONAL ANTIBODIES SPECIFIC TO ANTIGENS
 TRADITIONALLY OF LOW IMMUNOGENICITY

<130> 16631.0001

<140> 10573478

<141> 2008-06-24

<150> PCT/RU2004/000373

<151> 2004-09-24

<150> RU 2003128660

<151> 2003-09-25

<160> 22

<170> PatentIn Ver. 3.3

<210> 1

<211> 309

<212> DNA

<213> Human papillomavirus type 16

<220>

<221> CDS

<222> (7)..(303)

<400> 1

gaattc atc atg cat gga gat aca cct aca ttg cat gaa tat atg tta	48
Ile Met His Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu	
1 5 10	

gat ttg caa cca gag aca act gat ctc tac tgt tat gag caa tta aat	96
Asp Leu Gln Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn	
15 20 25 30	

gac agc tca gag gag gag gat gaa ata gat ggt cca gct gga caa gca	144
Asp Ser Ser Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala	
35 40 45	

gaa ccg gac aga gcc cat tac aat att gta acc ttt tgt tgc aag tgt	192
Glu Pro Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys	
50 55 60	

gac tct acg ctt cgg ttg tgc gta caa agc aca cac gta gac att cgt	240
Asp Ser Thr Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg	
65 70 75	

act ttg gaa gac ctg tta atg ggc aca cta gga att gtg tgc ccc atc	288
Thr Leu Glu Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile	

80

85

90

tgt tct cag aaa cca ggatcc

309

Cys Ser Gln Lys Pro

95

<210> 2

<211> 99

<212> PRT

<213> Human papillomavirus type 16

<400> 2

Ile Met His Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu

1

5

10

15

Gln Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn Asp Ser

20

25

30

Ser Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala Glu Pro

35

40

45

Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys Asp Ser

50

55

60

Thr Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg Thr Leu

65

70

75

80

Glu Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile Cys Ser

85

90

95

Gln Lys Pro

<210> 3

<211> 330

<212> DNA

<213> Human papillomavirus type 18

<220>

<221> CDS

<222> (7) .. (324)

<400> 3

gaattc agt atg cat gga cct aag gca aca ttg caa gac att gta ttg

48

Ser Met His Gly Pro Lys Ala Thr Leu Gln Asp Ile Val Leu

1

5

10

cat tta gag ccc caa aat gaa att ccg gtt gac ctt cta tgt cac gag

96

His Leu Glu Pro Gln Asn Glu Ile Pro Val Asp Leu Leu Cys His Glu

15

20

25

30

caa tta agc gac tca gag gaa gaa aac gat gaa ata gat gga gtt aat

144

Gln Leu Ser Asp Ser Glu Glu Glu Asn Asp Glu Ile Asp Gly Val Asn

35

40

45

cat caa cat tta cca gcc cga cga gct gaa cca caa cgt cac aca atg 192
 His Gln His Leu Pro Ala Arg Arg Ala Glu Pro Gln Arg His Thr Met
 50 55 60

ttg tgt atg tgt tgt aag tgt gaa gcc aga att gag cta gta gta gaa 240
 Leu Cys Met Cys Cys Lys Cys Glu Ala Arg Ile Glu Leu Val Val Glu
 65 70 75

agc tca gca gac gac ctt cga gca ttc cag cag ctg ttt ctg aac acc 288
 Ser Ser Ala Asp Asp Leu Arg Ala Phe Gln Gln Leu Phe Leu Asn Thr
 80 85 90

ctg tcc ttt gtg tgt ccg tgg tgt gca tcc cag cag ggatcc 330
 Leu Ser Phe Val Cys Pro Trp Cys Ala Ser Gln Gln
 95 100 105

<210> 4

<211> 106

<212> PRT

<213> Human papillomavirus type 18

<400> 4

Ser Met His Gly Pro Lys Ala Thr Leu Gln Asp Ile Val Leu His Leu
 1 5 10 15

Glu Pro Gln Asn Glu Ile Pro Val Asp Leu Leu Cys His Glu Gln Leu
 20 25 30

Ser Asp Ser Glu Glu Glu Asn Asp Glu Ile Asp Gly Val Asn His Gln
 35 40 45

His Leu Pro Ala Arg Arg Ala Glu Pro Gln Arg His Thr Met Leu Cys
 50 55 60

Met Cys Cys Lys Cys Glu Ala Arg Ile Glu Leu Val Val Glu Ser Ser
 65 70 75 80

Ala Asp Asp Leu Arg Ala Phe Gln Gln Leu Phe Leu Asn Thr Leu Ser
 85 90 95

Phe Val Cys Pro Trp Cys Ala Ser Gln Gln
 100 105

<210> 5

<211> 5321

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic nucleotide
 sequence of recombinant vector pQE30-dnaK

<400> 5

ctcgagaaat cataaaaaat ttatttgctt tgtgagcgga taacaattat aatagattca 60
 attgtgagcg gataacaatt tcacacagaa ttcattaaag aggagaaatt aactatgaga 120

ggatcgcatc	accatcacca	tcacggatcc	gctcgtgcgg	tcgggatcga	cctcgggacc	180
accaactccg	togtctcgg	tctggaaggt	ggcgaccgg	tcgtcgtcgc	caactccgag	240
ggctccagga	ccaccccgtc	aattgtcgcg	ttcgcccgca	acggtgaggt	gctggtcggc	300
cagcccgcca	agaaccaggc	agtgaccaac	gtcgatcgca	ccgtgcgctc	ggtcaagcga	360
cacatgggca	gcgactggtc	catagagatt	gacggcaaga	aatacaccgc	gccggagatc	420
agcgcccgca	ttctgatgaa	gctgaagcgc	gacgccgagg	cctacctcgg	tgaggacatt	480
accgacgcgg	ttatcacgac	gcccgcctac	ttcaatgacg	cccagcgtea	ggccaccaag	540
gacgccggcc	agatcgccgg	cctcaacgtg	ctgcggatcg	tcaacgagcc	gaccgcggcc	600
gcgctggcct	acggcctcga	caagggcgag	aaggagcagc	gaatcctgg	cttcgacttg	660
ggtggtggca	ctttcgacgt	ttccctgctg	gagatcggcg	aggggtgtgt	tgagggtccgt	720
gccacttcgg	gtgacaacca	cctcggcggc	gacgactggg	accagcgggt	cgtcgatttg	780
ctggtggaca	agttcaagg	caccagcggc	atcgatctga	ccaaggacaa	gatggcgatg	840
cagcggctgc	gggaagccgc	cgagaaggca	aagatcgagc	tgagttcgag	tcagtcacc	900
tcgatcaacc	tgcctacat	caccgtcgac	gccgacaaga	acccgttgtt	cttagacgag	960
cagctgaccc	gcgcgaggtt	ccaacggatc	actcaggacc	tgctggaccg	cactcgcaag	1020
ccgttcaggt	cggtgatcgc	tgacaccggc	atctcggtgt	cggagatcga	tcacgttgtg	1080
ctcgtgggtg	gttcgaccgg	gatgcccgcg	gtgaccgatc	tggtcaagga	actcaccggc	1140
ggcaaggaac	ccaacaagg	cgtcaacccc	gatgaggttg	tcgcggtggg	agccgctctg	1200
caggccggcg	tcctcaagg	cgaggtgaaa	gacgttctgc	tgcttgatgt	taccccgctg	1260
agcctgggtg	tcgagaccaa	gggcgggggtg	atgaccaggc	tcacgagcgc	caacaccacg	1320
atccccacca	agcggtcgga	gactttcacc	accgccgacg	acaaccaacc	gtcgggtgcag	1380
atccaggtct	atcaggggga	gcgtgagatc	gccgcgcaca	acaagttgct	cgggtccttc	1440
gagctgaccg	gcaccccgcc	ggcgcccgcg	gggattccgc	agatcgaggt	cactttcgac	1500
atcgacgcca	acggcattgt	gcacgtcacc	gccaaggaca	agggcaccgg	caaggagaac	1560
acgatccgaa	tcaggaagg	ctcgggcctg	tccaaggaag	acattgaccg	catgatcaag	1620
gacgccgaag	cgcacgccga	ggaggatcgc	aagcgtcgcg	aggaggccga	tgttcgtaat	1680
caagccgaga	cattggtcta	ccagacggag	aagttcgtca	aagaacagcg	tgaggccgag	1740
ggtggttcga	aggtacctga	agacacgctg	aacaagggtg	atgccgcggg	ggcggaagcg	1800
aaggcggcac	ttggcggatc	ggatatttcg	gccatcaagt	cggcgatgga	gaagctgggc	1860
caggagtgcg	aggctctggg	gcaagcgatc	tacgaagcag	ctcaggctgc	gtcacaggcc	1920
actggcgctg	cccaccccg	cggcgagccg	ggcggtgcc	accccggtc	ggctgatgac	1980
gttgtggacg	cggaggtggt	cgacgcaggc	cgggaggcca	agtgcaggac	gggtcgacct	2040
gcagccaagc	ttaattagct	gagcttggtg	tcctgttgat	agatccagta	atgacctcag	2100
aactccatct	ggatttggtc	agaacgctcg	gttgccgcgc	ggcgttttt	attggtgaga	2160
atccaagcta	gcttggcgag	attttcagga	gctaagggaag	ctaaaatgga	gaaaaaaaa	2220
actggatata	ccaccgttga	tatatcccaa	tggcatcgta	aagaacattt	tgaggcattt	2280
cagtcagttg	ctcaatgtac	ctataaccag	accgttcagc	tggatattac	ggccttttta	2340
aagaccgtaa	agaaaaataa	gcacaagttt	tatccggcct	ttattcacat	tcttgcccg	2400
ctgatgaatg	ctcatccgga	atttcgtatg	gcaatgaaag	acggtgagct	ggtgatatgg	2460
gatagtgttc	acccttggtt	caccgttttc	catgagcaaa	ctgaaacgtt	ttcatcgctc	2520
tggagtgaat	accacgacga	tttcgggcag	tttctacaca	tatatcgcga	agatgtggcg	2580
tgttacggtg	aaaacctggc	ctatttcctt	aaagggttta	ttgagaatat	gtttttcgtc	2640
tcagccaatc	cctgggtgag	tttcaccagt	tttgatttaa	acgtggccaa	tatggacaac	2700
ttcttcgccc	cgtttttcac	catgggcaaa	tattatacgc	aaggcgacaa	ggtgctgatg	2760
ccgctggcga	ttcaggttca	tcatgccgtt	tgtgatggct	tccatgtcgg	cagaatgctt	2820
aatgaattac	aacagtactg	cgatgagtgg	cagggcgggg	cgtaattttt	ttaaggcagt	2880
tattggtgcc	cttaaacgcc	tggggtaatg	actctctagc	ttgaggcatc	aaataaaacg	2940
aaaggctcag	tcgaaagact	gggccttttc	ttttatctgt	tgtttgtcgg	tgaacgctct	3000
cctgagtagg	acaaatccgc	cctctagagc	tgctcgcgc	gtttcggtga	tgacggtgaa	3060
aacctctgac	acatgcagct	cccggagacg	gtcacagctt	gtctgtaagc	ggatgccggg	3120
agcagacaag	cccgtcagg	cgcgtcagcg	ggtgttggtg	ggtgtcgggg	cgcagccatg	3180
accagtcac	gtagcgatag	cggagtgtat	actggcttaa	ctatgcggca	tcagagcaga	3240
ttgtactgag	agtgcaccat	atgcggtgtg	aaataccgca	cagatgcgta	aggagaaaa	3300
accgcatcag	gcgctcttcc	gcttcctcgc	tcactgactc	gctgcgctcg	gtcgttcggc	3360
tcgggcgagc	ggtatcagct	cactcaaagg	cggtaatatc	gttatccaca	gaatcagggg	3420
ataacgcagg	aaagaacatg	tgagcaaaa	gccagcaaaa	ggccagggaac	cgtaaaaaag	3480
ccgcgttgct	ggcgtttttc	cataggctcc	gccccctga	cgagcatcac	aaaaatcgac	3540

```

gctcaagtca gaggtggcga aacccgacag gactataaag ataccaggcg tttccccctg 3600
gaagctccct cgtgcgctct cctgttccga ccctgccgct taccggatac ctgtccgcct 3660
ttctcccttc gggaagcgtg gcgctttctc atagctcacg ctgtaggatc ctgagttcgg 3720
tgtaggtcgt tcgctccaag ctgggctgtg tgcacgaacc ccccgttcag cccgaccgct 3780
gcgccttatc cggtaactat cgtcttgagt ccaaccgggt aagacacgac ttatcgccac 3840
tggcagcagc cactggtaac aggattagca gagcgaggta tgtaggcggg gctacagagt 3900
tcttgaagtg gtggcctaac tacggctaca ctagaaggac agtatttggg atctgcgctc 3960
tgctgaagcc agttaccttc ggaaaaagag ttggtagctc ttgatccggc aaacaaacca 4020
ccgctggtag cgggtggtttt tttgtttgca agcagcagat tacgcgcaga aaaaaaggat 4080
ctcaagaaga tcctttgatc ttttctacgg ggtctgacgc tcagtggaac gaaaactcac 4140
gttaagggat tttgggtcatg agattatcaa aaaggatctt cacctagatc cttttaaatt 4200
aaaaatgaag ttttaaatac atctaaagta tatatgagta aacttgggtc gacagttacc 4260
aatgcttaat cagtgaggca cctatctcag cgatctgtct atttcgttca tccatagttg 4320
cctgactccc cgtcgtgtag ataactacga tacgggaggg cttaccatct ggccccagtg 4380
ctgcaatgat accgcgagac ccacgctcac cggtccaga tttatcagea ataaaccagc 4440
cagccggaag ggccgagcgc agaagtggtc ctgcaacttt atccgcctcc atccagtcta 4500
ttaattgttg ccgggaagct agagtaagta gttcgccagt taatagtttg cgcaacgttg 4560
ttgccattgc tacaggcatc gtggtgtcac gctcgtcgtt tggtagggct tcattcagct 4620
ccggttccca acgatcaagg cgagttacat gatcccccac gttgtgcaaa aaagcggtta 4680
gctccttcgg tcctccgacg gttgtcagaa gtaagtggc cgcagtgtta tcatcatgg 4740
ttatggcagc actgcataat tctcttactg tcatgccatc cgtaagatgc ttttctgtga 4800
ctggtgagta ctcaaccaag tcattctgag aatagtgtat gcggcgaccg agttgctctt 4860
gccggcgctc aatacgggat aataccgcgc cacatagcag aactttaaaa gtgctcatca 4920
ttggaaaacg ttcttcgggg cgaaaactct caaggatctt accgctgttg agatccagtt 4980
cgatgtaacc cactcgtgca cccaactgat cttcagcatc ttttactttc accagcgttt 5040
ctgggtgagc aaaaacagga aggcaaaatg ccgcaaaaaa gggaataagg gcgacacgga 5100
aatgttgaat actcatactc ttcctttttc aatattattg aagcatttat cagggttatt 5160
gtctcatgag cggatacata tttgaatgta tttagaaaaa taaacaaata ggggttccgc 5220
gcacatttcc ccgaaaagtg ccacctgacg tctaagaaac cattattatc atgacattaa 5280
cctataaaaa taggcgtatc acgaggccct ttcgtcttca c 5321

```

<210> 6

<211> 12

<212> PRT

<213> Bos taurus

<400> 6

```

Lys Lys Arg Pro Lys Pro Gly Gly Gly Trp Asn Thr
  1                   5                   10

```

<210> 7

<211> 8

<212> PRT

<213> Bos taurus

<400> 7

```

Gln Pro His Gly Gly Gly Trp Gly
  1                   5

```

<210> 8

<211> 13

<212> PRT

<213> Bos taurus

<400> 8

Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Ile Lys

1 5 10

<210> 9

<211> 17

<212> PRT

<213> Bos taurus

<400> 9

Ile Thr Gln Tyr Gln Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly Ala

1 5 10 15

Ser

<210> 10

<211> 19

<212> DNA

<213> Human papillomavirus type 16

<400> 10

tgacagctca gaggaggag 19

<210> 11

<211> 19

<212> DNA

<213> Human papillomavirus type 16

<400> 11

gcacaaccga agcgtagag 19

<210> 12

<211> 20

<212> DNA

<213> Human papillomavirus type 18

<400> 12

gcgactcaga ggaagaaaac 20

<210> 13

<211> 20

<212> DNA

<213> Human papillomavirus type 18

<400> 13

caaaggacag ggtgttcaga 20

<210> 14

<211> 31

<212> DNA

<213> Human papillomavirus type 18

<400> 14

tctaacgaat tcagtatgca tggacctaag g 31

<210> 15

<211> 30

<212> DNA

<213> Human papillomavirus type 18

<400> 15

attacaggat ccctgctggg atgcacacca 30

<210> 16

<211> 31

<212> DNA

<213> Human papillomavirus type 16

<400> 16

attctcgaat tcatcatgca tggagataca c 31

<210> 17

<211> 31

<212> DNA

<213> Human papillomavirus type 16

<400> 17

cttatcggat cctggtttct gagaacagat g 31

<210> 18

<211> 130

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic pHE716 and
pHE718 terminal sequence

<220>

<221> misc_feature

<222> (107)..(108)

<223> HSP 16/HSP18 E7 gene insertion site

<400> 18

taatacgact cactataggg agaccacaac ggtttccctc tagaaataat tttgtttaac 60
tttaagaagg agatatacat atgcatacc atcaccatca cgaattcgga tectaattag 120
ctgaaagctt 130

<210> 19

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 19

gaagatctat gcattggagat acacctac

28

<210> 20

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 20

cgggatccctg gtttctgaga acagatgg

28

<210> 21

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 21

gaagatctat gcattggacct aaggcaac

28

<210> 22

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 22

cgggatccct gctgggatgc acaccacg

28